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INDIAN NOTES AND MONOGRAPHS

EDITED BY F. W. HODGE

VOL. I



No. 4

A SERIES OF PUBLICA-
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AMERICAN ABORIGINES

POTTERY TYPES AND THEIR SEQUENCE IN EL SALVADOR

BY

SAMUEL KIRKLAND LOTHROP

NEW YORK
MUSEUM OF THE AMERICAN INDIAN
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FOREWORD



HUMAN refuse must in time embrace all the material culture which enters into the life of the individual and the society in which he lives, so that, were it possible to regain all the objects discarded because they are broken, outworn, out of style, or forgotten, we should be able to redraw a complete picture of the past. In theory this sounds simple, but in practice it is difficult, for the archeologist must often depend on fortuitous finds censored by the elimination of perishable artifacts. Yet where a given locality has been inhabited for a long time and deposits of refuse have accumulated, we should be able to separate them into strata representing succeeding epochs.

The stratigraphical method of studying products of past ages may be defined as excavating a series of thin layers in such manner that finds of different levels may be segregated. This is done on the assumption that the oldest remains are most deeply buried and that stylistic divergence can be detected between the upper and the lower finds. At times it is possible to discover superimposed burials of different epochs, but in general, refuse—especially potsherds—gives more dependable results. The chief difficulties of applying the strati-

graphical method are: (1) Sites where deep and diversified rubbish exists are not over common, and they usually can be determined only by costly excavation; (2) objects frequently are moved in the ground by burrowing animals and otherwise from one level to another; (3) this method is slow, laborious, expensive, and demands much patience. The first of these, lack of known stratified sites, has prevented the application of this method in Central America.

New World stratigraphical studies have been most highly developed and successfully employed in southwestern United States, in the states of Arizona and New Mexico. As a result the story of much of that region for a number of centuries before the advent of Europeans has been interpreted. The reason for this success is in part that ease of access, low transportation costs, favorable climate, and freedom from governmental interference have attracted expert excavators. However, the archeological remains there are encountered under more favorable circumstances than in other regions. Thus the Indians often lived in vast communal houses—sometimes the abode of thousands—so that there is an unusual concentration of rubbish. Equally important is the fact that absence of vegetation exposes archeological objects on the surface, so that it is possible to determine without excavation which sites will yield stylistically diversified remains. Furthermore, there are relatively few places where good agricultural lands, naturally defensive positions, and an adequate water supply coëxist, which have resulted in long-continued occupancy of such favored localities. In

short, nature and man have combined to create conditions most helpful to students of the past.

In Central America, however, circumstances are very different. All the external factors are unfavorable. Ancient remains are often difficult to reach; transportation consumes a large part of available funds; heat and heavy rains induce unhealthful conditions and rank vegetation; governments, forgetful that antiquity has no intrinsic value, at times regard archeological studies by foreigners equivalent to robbery of the national treasury. Also, in Central America, the ancient cities often cover a huge extent, perhaps several square miles, with the result that the rubbish is not concentrated, but is widely scattered and thinly deposited. Furthermore, the mountainous regions, which now seem to have been the territory longest inhabited by sedentary agricultural populations, have been subject to violent earthquakes and devastating volcanic eruptions since they were first occupied by man. Outpourings of lava and ash have so changed the surface of the country that mountains have risen and disappeared, and river courses have altered. Thus in Salvador the Volcano Izalcos some two hundred years ago was simply a volcanic vent in open pastureland, but today is a mountain 6283 feet high. Also the present Lake Ilopango, as we presently shall have reason to show, is the scoured-out base of a once vast volcanic cone. Plutonic forces often spread tragedy in Central America, and man has had to move to escape catastrophe or to adapt himself to altered topography.

The stratified remains to be described—the only ones

now known between central Mexico and Ecuador—are contained within and under the ash layers thrown out by the Volcano Ilopango. The brief notice given here is hardly more than a statement of problems, of which more have been raised than have been solved. However, the fact that superimposed refuse of succeeding epochs has at last been found in Central America means that archeological methods which have been successfully employed elsewhere may now be applied to this region.

DISCOVERY OF STRATIGRAPHY

THE presence of the stratified remains of former occupancy in central Salvador was established some years ago by Don Jorge Lardé, who in 1924 published a short paper describing his discoveries. After the earthquake and eruption of 1917 Lardé had undertaken a thorough study of the eruptive products of the Volcano San Salvador. At the same time his attention was called to archeological specimens found far underground in a layer of vegetal mold subsequently covered by volcanic ash. Believing that it might be possible to date various eruptions of the volcano by the human remains buried in them, Lardé continued to investigate the local archeology in relation to the geology until he had ascertained (1) that the black earth covered by volcanic ash extended in every direction for many miles, (2) that the archeological specimens contained therein were refuse buried by subsequent ash showers and not funeral furniture introduced at some later period, and that (3) other archeological remains—both



FIG. 1.—Railroad cut above the Rio Acelhuate. Archeological remains occur in layer C

refuse and funeral offerings—occurred in the upper ash layers. In April of 1924 Professor Lardé was good enough to tell the writer of these discoveries and to

take him to a deep cut on the railroad above the Rio Acelhuate (fig. 1) where potsherds could be seen in the underlying humus and pertinent geological strata could be observed.

GEOLOGICAL DATA

THE general construction of the land for many miles around the city of San Salvador is shown in figs. 1 and 2. The present surface (fig. 2, A) is composed of rotted



FIG. 2.—Typical section near San Salvador

vegetal matter, which, by its very nature, attests that no great ash fall has taken place for centuries. Below are many layers of white volcanic ash (B), piled up to a depth exceeding forty feet at the spot shown in fig. 1. That the many eruptions which created this great mass of material did not occur in rapid succession is proved by the fact that considerable erosion took place at

intervals during the constructive period. Lardé's studies show that these ashes have been thrown out not by the Volcano San Salvador but by the Volcano (now the lake) Ilopango, because the ash is found at least ten miles from every side of Ilopango, while it does not occur on the west side of the Volcano San Salvador. Ilopango today is a beautiful lake measuring five and one-half by eight miles. It is, however, still an active volcano, and islands have been thrust up through its waters as recently as 1880. Formerly the present great steep-walled depression must have been covered by a vast cone, blown to pieces to form the ash layers we have discussed. Explosions of comparable size are known elsewhere. Pompeii is of course a classical example. In 1835 the greater part of the cone of the Volcano Coseguina in Nicaragua was blown apart. The explosion was so violent that slight ash falls were observed at such distant places as Vera Cruz in Mexico, Bogota in Colombia, and the island of Jamaica.

Below the ash layers described lies a black vegetal soil (figs. 1 and 2, c) which contains human refuse. Its thickness is about eight inches. Both its presence and its bulk indicate a long period when the volcanoes remained inactive. The black earth (c) rests in turn upon another series of ash layers (d) slightly darker in color than the upper laminæ. In places lava flows (e) have pushed through the lower ash (d) to the former surface of the earth (c). As for the age of these underlying strata, the lava intrusions may be correlated with the upbuilding of the adjacent Coast Range (Cordillera Costera) which separates San Salvador from the Pacific

ocean. The darker ash layers (D) are said to contain mastodon bones. They are not contemporaneous with any traces of man yet discovered, but, from a geological point of view, they do not long antedate man.

EXCAVATION ON THE CERRO ZAPOTE

In 1924 the writer was not prepared to publish any remarks on the stratigraphy, for the original discovery

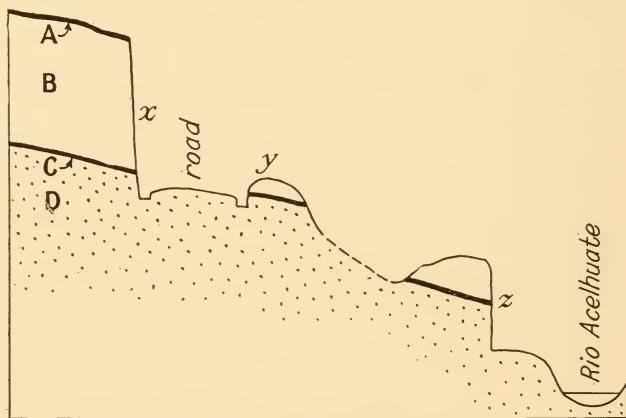


FIG. 3.—Section of Cerro Zapote, San Jacinto, Salvador. (*x, z*, Cuts showing stratified remains; *y*, Place excavated)

was Lardé's and no further contribution seemed possible without the great expense of sinking huge trenches to determine the archeological types involved. In January of 1926, however, with the aid of Professor Lardé, a place was found on the side of the Cerro Zapote in the Barrio of San Jacinto on the outskirts of San Salvador where the underlying humus (layer c in figs. 1 and 2)

could be reached with a minimum of excavation and where archeological remains occurred both in the buried humus (c) and in the ash layers (B) above it. The site was rendered more suitable by the fact that the Museum possessed a large collection found in the upper ash layers several hundred yards away, and also a small collection of pottery found at a similar level within a very short distance of the spot selected for excavation. The latter was presented by Col. Jesus M. Bran of the garrison on the Cerro Zapote, who most kindly furnished soldiers to perform the necessary digging.

Excavation was made on the edge of the road which runs across the face of the Cerro Zapote above the Rio Acelhuate at a point opposite the Finca Modelo. On the upper side of the road (fig. 3, point *x*) potsherds could be extracted from the cut, while on the lower side (fig. 3, point *y*) it was possible to reach the refuse in the buried humus (layer c) with little effort, as the hillside had served as a gravel pit. Farther down the hill refuse was seen in the buried humus in a cut just above the river (fig. 3, point *z*). The results of excavation, which we shall consider in detail, were the recovery of a pottery head, numerous potsherds, and fragments of obsidian blades.

LOWER-LEVEL TYPES

Of the objects unearthed on the Cerro Zapote, a pottery head is shown in fig. 4, *h*. It is solid, and the thickness is about half the width. The eyes and mouth are indicated by incised slits, while the nose, cheeks,

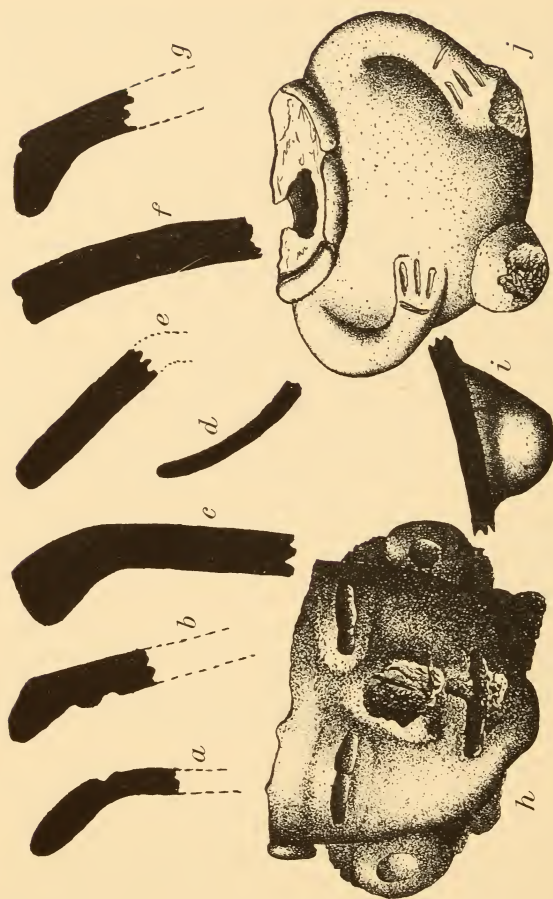


FIG. 4.—Archeological types from the lowerlevel, Cerro Zapote, San Jacinto, Salvador. Diameter of *h*, 3 inches

and chin are fairly well modeled. It clearly belongs to the culture known as the "Archaic," found elsewhere in Mexico and Central America. The curious fat-bellied figurine seen in fig. 4, *j*, was extracted from the same layer on the upper side of the road by Don Jorge Lardé. The barrel-like body at once recalls the stone figures found in the highlands of Guatemala (Lothrop, 1926, *b*, fig. 53) and also red-ware figurines from north-western Costa Rica (Lothrop, 1926, *a*, fig. 163, *b*). While there is no good evidence at present available for dating the Costa Rican figurines, we have reason to believe that the Guatemalan statues are quite ancient, for they are stylistically related to carvings found under the ruins of Copan.

The potsherds excavated from the lower level on the Cerro Zapote, seen in fig. 4, *a-g*, indicate vessels with unrestricted orifices, fairly thick walls, and everted and slightly thickened lips. The surface of the clay has often been colored with a dull-orange wash, which at times is heavy enough to approach the consistency of a slip. Decoration was obtained (1) by broad, incised, encircling lines or grooves, and also (2) by patterns painted in parallel black lines which suggest but actually are not comb-markings. This black paint, as a result probably of some chemical action or possibly of over-firing, has usually vanished and has destroyed the orange wash on which it lodged. Hence the patterns often appear as light-colored lines standing out against the orange field. Thus many specimens look as if they were—perhaps some actually are—decorated by the well-known wax-painting method. Small, conical, solid



FIG. 5.—Early "Archaic" pottery type, Santa Elena, Salvador

legs (fig. 4, *i*) are a feature of these vessels.

The type of pottery described occurs in some numbers in the Museum collections, obtained, for the greater part, in the Departments of Usulután and San Miguel in eastern Salvador. Typical examples, of which we show two in fig. 5, have the same thickened lips, broad encircling grooves, painted patterns, and conical legs (of which there are four on each vessel), as the

excavated material from the Cerro Zapote. They were obtained by purchase in 1924, and their exact finding-place is therefore not determined; but the writer was informed at the time that some of the collections of which they formed part had been discovered far underground.

In this connection the writer was interested to observe in a deep cut on the road between San Miguel and Quelepa a layer of black humus covered by many feet of volcanic ash cast out by the Volcano San Miguel. This



FIG. 6.—Vessel of elaborate form from Quelepa, Salvador, with early type of painted decoration

strongly suggested the conditions under which archeological remains are found near San Salvador, as has been described. Inquiry at adjacent houses elicited the statement that remains were found in this black soil, but time to verify this assertion by excavation was not available.

It seems quite possible that the humus buried by the ashes of Ilopango may be coeval with that similarly covered by the ashes from San Miguel; but this point remains to be determined. The writer has observed similar black strata beneath volcanic ash layers in the Department of Cuzcatlan, but at places of no archeological significance.

The Museum collection contains vessels, such as fig. 6, which are ornamented with parallel-line decoration on an orange wash like some of the lower-level pottery from the Cerro Zapote. These pieces, however, do not have the rim sections of the pottery we have proved to be very ancient. Also they often have a wide ridge encircling the greatest diameter with animal limbs and head indicated thereon, like some of the orange-brown ware bowls from Costa Rica (cf. Lothrop, 1926, pl. cix, *e, f*). The legs are usually mammiform, hollow, and very large in proportion to the body of the pot. We do not know whether this kind of pottery is contemporaneous with or later than the early type seen in fig. 5, but suppose that it is a later development.

We have already established that the lower-level (layer c in fig. 3) remains from the Cerro Zapote include pottery heads of the "Archaic" culture and potsherds of a type represented by complete vessels from El Salvador. We must now extend our inquiries into other regions in search of cognate material. We shall base our discussion not on figurine types (which have been the basis of most studies of the "Archaic" culture), but rather on the vessel types, because the material available is greater and more complex, and is therefore more useful for solving our problems. Also to the writer it seems that the investigation of "Archaic" figurines, pursued by many able students, has been pushed to the point of sterility, and that it is well to attack the subject on a different basis. Our inquiry will lead to the north and west—to Mexico, Guatemala,

and Honduras—because Salvador is the southern boundary of the “Archaic” culture as now known.

For comparative material from the Valley of Mexico the writer is indebted to Prof. A. M. Tozzer, who generously made available the large sherd collection in the



FIG. 7.—Archeological types from the lower level, Valley of Mexico. (About $\frac{1}{2}$.) Courtesy of Peabody Museum, Harvard University

Peabody Museum of Harvard University and also a manuscript report on a careful study of this material prepared by Mr. G. C. Vaillant. Vaillant had delimited six major wares: brown ware, white ware, polished red ware, three-color ware, two-color incised ware, and heavy red-on-yellow ware. The most important likeness to the Salvador lower-level pottery is the presence

of broad encircling bands in the red ware (fig. 7, *a, e, f*). In a more general way other features related to the south may be named, such as: (1) conical or globular legs (of which four support each vessel as in Salvador), (2) parallel-line painted patterns (fig. 7, *i*), (3) thickened lips, (4) offset rims, and (5) unrestricted orifices. These characteristics are not universal in any one ware, but occur sporadically. Another rim series similar to our fig. 7 has been published by Gamio (1920, fig. 10).

Examination of the Valley of Mexico sherds also shows technological and decorative features not found in the lower-level pottery from Salvador, among which we may mention: (1) thin-line incising after firing, (2) notching—a decorative technique perhaps represented by series of modeled knobs in Salvador, (3) “cuneiform” incising, (4) incised outline technique (two colors separated by an incised line), (5) unpolished outer walls—perhaps purposely roughened, and (6) globular jars with restricted orifices. We list these features in full in order to make it clear that many of the features of the classical “Archaic” pottery of Mexico do not extend to Guatemala and Salvador. At the same time other components of the classical “Archaic” pottery obviously are found farther south. We therefore seem justified in believing that the cultural stream had its origin, if not in the Valley of Mexico, at least somewhere in the north, where the greatest complexity of types may be observed, and that this stream reached Salvador only in attenuated form.

Turning now to Guatemala, fig. 8 shows sherds from the Arevalo-Miraflores ruins, left beside a three-foot

trench by the Washington Archaeological Society Expedition of 1926. Similar sherds and clay heads recalling our fig. 3, *h*, may be picked up whenever the land is plowed. They exhibit (1) thickened lips, (2) offset rims, (3) solid globular legs, (4) broad encircling bands, (5) parallel-line painted decoration, and (6) unrestricted orifices—in short, all the features which we have shown to be characteristic of the Salvador lower-level pottery.

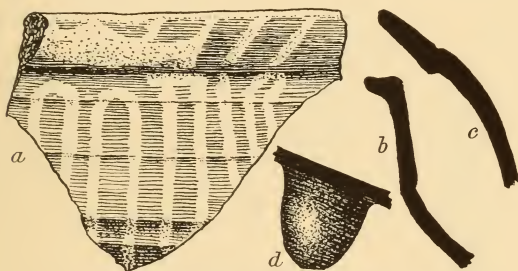


FIG. 8.—Sherds from Hacienda Miraflores, Guatemala

It is worthy of note that both in the Valley of Mexico and in Salvador the “Archaic” remains are found far underground, while at the Finca Arevalo they are turned up by plowing. The explanation lies in the fact that volcanic débris has accumulated in the two former regions since their occupancy by man, while at the Guatemalan sites no such occurrence apparently has taken place. Several examinations of this Guatemalan site, study of the stone-carving and of sherd collections, and scrutiny of the large Batres Jáuregui collection, lead the writer to the belief that at least three cultures

are here represented. However, for the greater part, if not entirely, they are not piled up on top of each other, but instead have accumulated horizontally.

In Honduras, heads of "Archaic" type have been found by the Peabody Museum, Harvard University, expeditions in the Ulua valley and at the ruins of Copan. In both cases the finds occurred in the same level as Maya polychrome pottery. This intermingling of cultures is also typical of the upper-level remains in Salvador. Among the Peabody Museum collections from the Ulua valley is a bowl, of which no illustration has been published, closely corresponding in type to the lower-level Salvador pottery, such as our fig. 5, *b*. In the same Museum is another vessel, collected by the writer at La Florida in the Department of Copan, which is also suggestive of the Salvador ware.

UPPER-LEVEL TYPES

We have wandered far afield to trace the affinities of the lower-level pottery. We must now return to the Cerro Zapote, where, on the upper side of the road (fig. 3, point *x*), potsherds may be extracted to a depth of six feet or more in the upper volcanic ash (layer B). The majority of these sherds fall into two general classes: painted and unpainted. The latter, of which we illustrate examples in fig. 9, are coarse-grained vessels such as are still in use among the country people (Lothrop, 1925, figs. 7, 8) for cooking and for storing water. They differ from the lower-level pottery in that (1) orifices are restricted, (2) the lips are not thickened, (3) incised

encircling bands are not found, and (4) loop-handles are common. Thus, while it is not always possible to distinguish at a glance all unpainted sherds from the upper and lower levels, at least in the case of rim sherds it is usually possible to do so.

As for the painted sherds from the Cerro Zapote, specimens are seen in fig. 10. Complete vessels of this class appear in fig. 12, *a*. This ware clearly is of Mayan inspiration, and it so closely resembles pottery from the Ulua valley in Honduras that the two in many instances are scarcely distinguishable. Both the Honduras and the Salvador groups probably are derived from the ceramics of Copan, to which great art center many of the designs may be traced. The upper-level polychrome pottery is distinguished from the lower-level painted ware (1) by the shapes of the vessels, (2) by the types of decorative patterns, and (3) by the colors employed.

From the foregoing remarks it appears that pottery is found in central Salvador buried under great depths of volcanic ash. We have shown that this pottery is allied stylistically to the earliest ceramic art now known in Mexico, and that connecting links can be found in Guatemala. We have also shown that nearer the



FIG. 9.—Undecorated rim types, upper level, Cerro Zapote, San Jacinto, Salvador.



FIG. 10.—Sherds from the upper level, Cerro Zapote, San Jacinto, Salvador. ($\frac{1}{2}$)

surface there can be found pottery of Maya Old Empire type, allied to if not as old as the pottery of Copan. This is relatively simple. However, the problem of culture sequence is complicated by the fact that remains of other cultures are also found near the surface of the ground. And these cannot be separated by the means we have thus far employed. Thus, on the Cerro Zapote, "Archaic" figurines (fig. 11), plumbate or glazed ware, and Toltec vessels adorned with heads of the god Tlaloc, are found in the upper ash layers.

A short distance to the south of the Cerro Zapote, and within the limits of the geological area we have described, lies the site of the ancient historic city of Cuzcatlan. This, the greatest of the Pipil (Toltec) centers in Salvador, was sacked and burned by Pedro de Alvarado in 1524. For many years the land has been in cultivation and has been plowed until no trace of the former city remains above ground. But this plowing has produced a large number of archeological specimens, all found within a few inches of the surface, most of which are now in the Deininger and Soundy collections. These their owners kindly allowed the writer to examine. Both were found to include Maya polychrome pottery, plumbate ware (fig. 18, *b*), Tlaloc heads (fig. 15, *b*), Nicoya polychrome pottery such as is found in Nicaragua and Costa Rica (fig. 18, *a, d*), and figurines and vessels of types which have been called "Archaic" (fig. 18, *e-g*).

A similar condition was found to exist many miles to the north, near the town of Suchitoto. This region, according to the *Titulo* of the Hacienda Los Almendros, was occupied by the Pipil at the moment of the conquest.

Here, through arrangements made in 1924 and the kindness of Don Hector Varquero, the writer recently ob-

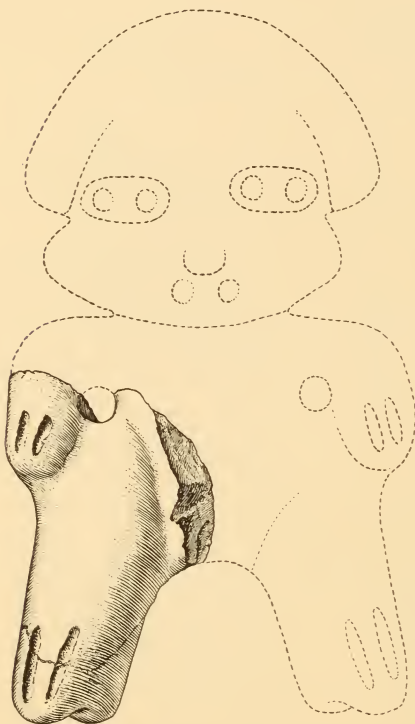


FIG. 11.—Fragment of "Archaic" figurine from upper level, Cerro Zapote, Salvador. ($\frac{1}{2}$)

tained a large collection of antiquities assembled by plowing. Again polychrome Maya pottery, Tlaloc heads, Nicoya polychrome ware, "Archaic," and plumbate ware were revealed as coming from the same level. In the vicinity of Suchitoto the writer made every effort to verify the conditions under which the Varquero collection had been formed. Test

pits were dug at two sites, numerous road cuts with archeological exposures were examined, and many sherds brought to light by plowing were inspected. The evidence thus obtained

again confirmed the assumption that the types listed were in part contemporaneous. The discovery of a small metal figure of a saint and of fragments of houses burnt presumably at the time of the conquest added the suspicion that some of the aboriginal remains did not long antedate the coming of the Spaniards.

As the surface of the earth is constantly disturbed by countless incalculable causes, the archeologist can never hope to find the types with which he deals so separated that he can predict their occurrence with the certainty that a chemist can foretell the result of an experiment many times repeated. Yet, when literally hundreds of examples of Maya, Toltec, and "Archaic" art, and also plumbate ware, all are found intermingled near the surface of the ground, the only logical conclusion—though it may run counter to some preconceived theories—is that these types are in part contemporaneous. This being so, to deal with the archeology of the upper level (until more detailed stratigraphy shall be discovered) we must fall back on stylistic evidence.

MAYA CULTURE

Maya polychrome pottery is one of the most beautiful, complex, and least understood of American aboriginal products. Although there are collections to study from Salvador, Copan, the Ulua valley, the Coban district, Holmul, Yaloch, and elsewhere, no great advance in knowledge can be expected until material from the great Maya cities of the Peten and the Usumacinta valley has been obtained. However, to the



FIG. 12.—Maya polychrome pottery, San Jacinto, Salvador. Drawn by John Held; courtesy of the Carnegie Institution of Washington. These pieces, formerly in the Justo Arnas collection, are now in the American Museum of Natural History.

archeologist this ware must ultimately prove the most important in the New World, for it is at times discovered under conditions which admit of exact dating, and moreover some of the pieces are themselves inscribed with dates. Thus the study of the development of ceramic decoration may be subject to the same chronological checks that have been applied to the stone-carving. But, unlike large stone sculptures, pottery vessels and the designs thereon pass in trade. Therefore in this ware we have a master-key to detailed chronological knowledge both within and outside the Maya area.

The Maya polychrome pottery discovered in Salvador may be divided into several classes on stylistic grounds. Most decorative and rarest of these are cylindrical jars adorned with a painted frieze, usually representing some mythological or religious pageant, which completely encircles the vessel. Of this group, fig. 12, *c*, *d*, are representative examples. Similar frieze-decorated pottery comes from the highlands and Coban region in Guatemala. Some splendid examples have been published by Joyce (1914, pl. xxiv) and Dieseldorff (1904, pls. XLVIII, XLIX; also 1926, pl. 22). This type of pottery is found also in the Ulua valley in northeastern Honduras, specimens from which have been illustrated by Gordon (1896, pl. v).

Another group comprises cylindrical jars and bowls with flaring walls, set on solid, oval, tripod legs. Decoration consists of painted human, bird, or animal figures repeated twice or three times, separated by small geometric panels. These panels may have painted patterns or incised patterns. In the latter case the whole panel

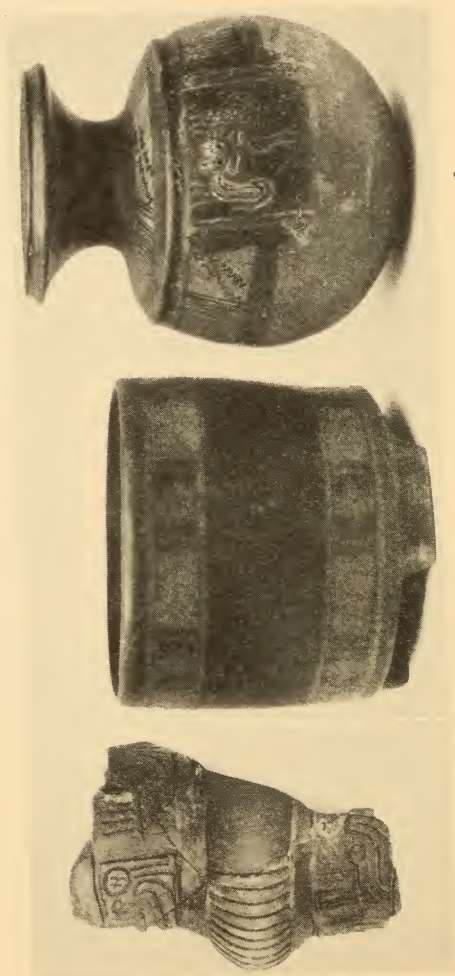


FIG. 13.—Contemporaneous pottery types: vessels from one grave, Hacienda de la Patrocinia, Suchitoto, Salvador. (Heights, $5\frac{1}{4}$, $7\frac{1}{8}$, 10 inches)

was painted black or red after the incising was finished. Examples of the human-figure motive seen in fig. 12, *a*, *b*, are connected with ceramic designs developed at Copan as early as the fifth century, A.D., as the writer has shown elsewhere (1926, vol. 1, p. 131). Fig. 10, *a*, *c*, exhibit fragments of this design from the upper strata at the Cerro Zapote. The thin-line technique of fig. 12, *b*, apparently is a local development.

A third type of Maya polychrome decoration is distinguished by the fact that the pattern is set off by a black background, as in figs. 13, *b*, and 14, *c*. The latter is adorned with a gourd design on a black ground like a vessel from the Ulua valley published by Gordon (1898, pl. iv). Both the examples here illustrated are marked by a well-rounded in-sloping lip. This characteristic extends to the black-background vessels from Copan and the Ulua valley.

Another Maya polychrome group is decorated in a thin-line technique apparently executed carelessly and rapidly. The example in fig. 18, *c*, shows that the red filling of the design often carelessly overlaps the black outline, while the latter is most irregularly applied. Both this kind of decoration and the shape illustrated recur in the Ulua valley.

In addition to polychrome pottery other ceramic types of Maya affinity are found in Salvador. Two of these we illustrate in fig. 13, which shows vessels known to be contemporaneous, as they come from the same grave. Of these, *b* is a polychrome piece with a black background and the usual associated lip type. The painted geometric design pertains to Old Empire Maya art, for

it has been found by Tozzer (1913, fig. 86) at the ruins of Nakum in northern Guatemala. The white-on-red decoration of *c* is quite common in central Salvador. An example of this ware has been excavated in mound 36 at Copan, and is now in the Peabody Museum, Harvard University. The incised fragment, *a*, also is an Old Empire type.

To recount the varieties of Maya pottery not found in Salvador would take us far afield and raise difficult questions not pertinent to the present subject. We may say, however, that as in the case with the "Archaic" culture Salvador was the frontier. South of Salvador one recognizes Maya influence in design and in pottery shapes, but the examples of Maya handiwork are so rare that we can assume only that they came by trade. Indeed, the Maya seem never to have crossed the lower course of the Lempa river, nor to have penetrated eastern Salvador.

PIPIL CULTURE

The Pipil Indians of Salvador, according to native tradition, were one of several offshoots from the great Toltec empire of central Mexico which collapsed in the eleventh century, A.D. The date of the arrival of the Pipil in Salvador is uncertain, though it seems safe to assume that none of their remains in Salvador antedate the conquest by more than three or four centuries. Typical of their culture are bottles representing Tlaloc, the Mexican Rain god, such as fig. 15, *b*. They are found in some numbers around Cuzcatlan and northward as far as the Lempa river. In type they are very



FIG. 14.—Central Salvador pottery types. *a*, Chorolegan style; *b*, *d*, probably Pipil; *c*, Maya.



FIG. 15.—*a*, Doubtful type, Puerto de la Laguna (restored); *b*, *c*, Pipil pottery types, San Jacinto and Hacienda Consolacion, Salvador

close to Tlaloc heads found in the State of Jalisco and elsewhere in Mexico. Associated with them in the ground are life-size images of frogs, sacred to Tlaloc, such as fig. 16, *b*, also incense burners with long serpent handles (see Spinden, 1915, figs. 80, 81) recalling incense burners found in central Mexico or those portrayed in Aztec codices; likewise figurines of sub-Maya stamp



FIG. 16.—Pipil types, Salvador. *a*, Valle Palacios;
b, Suchitoto

like fig. 15, *c*, as well as portrait jars (fig. 16, *a*) and burial urns. The Pipil remains are not so clear-cut as one could wish, for these people seem to have acquired the arts of their neighbors through intermarriage. Judged by their distribution, the two polychrome pottery types seen in fig. 14, *b*, *d*, may be attributed to the Pipil. One has a heavy black-line decoration with a red filling. Cross-hatched triangles are a common motive. The other is painted with thin wiry lines filled with orange. Both wares at times carry patterns of Maya origin, such as the human-figure motive of fig. 12, *a*, *b*.

The great importance of Pipil remains to the student is that they are known to be comparatively recent and yet have been found on the same archeological floor as the "Archaic," Old Empire Maya, and Chorotegan cultures. "Archaic" and Chorotegan art has admittedly persisted until the conquest in other regions, but Old Empire Maya art, it generally has been assumed, was snuffed out with the abandonment of the Old Empire cities in the seventh century, A.D. As a matter of fact, the only evidence that the Maya cities were abandoned at this time is that dated stone-carvings ceased to be erected. Native traditions which have survived—Quiche, Cakchiquel, and Yucatecan—all pertain to tribes that migrated. Others may have stayed behind. The ancient cities of the Peten were uninhabited, to be sure, when Cortés traversed the jungles in 1525, but the country was inhabited by the Lacondones and Itzas. Copan, the district, if not the actual city, was thickly settled by Maya Indians speaking the Chorti dialect in 1530 when it was conquered by Alonso de Chaves.

Indeed, the very name comes from the native chieftain Copan Calel. What archeological remains are to be attributed to this historic Chorti group, apparently not uncivilized, who fought so well against the Spaniards? Had these people abandoned Copan for the Ulua valley and Salvador, carrying with them a strongly developed esthetic tradition, and then centuries later reoccupied their former homeland? Or has the Copan region been continuously inhabited, though at times by diminished populations? These and other questions can be answered only by excavation, not alone at the great ruins themselves, but at the lesser sites such as the mound groups scattered through the adjacent valleys.

In all events the evidence seems clear that Maya art of Old Empire type flourished in Salvador long after stone construction ceased at Copan and that this art finally fused with the Pipil culture. Similarity of archeological finds indicates that a similar late Old Empire culture persisted in the Ulua valley in Honduras.

“ARCHAIC” CULTURE

Turning to the upper level “Archaic” remains, it seems that the figurines (fig. 17) differ from those of the lower floor in that they are usually mold-made, often are hollow, and that the features more often are indicated by punctured dots than by slits. However, these characteristics at best are not conclusive; it is rather in pottery vessels that early and late forms may be distinguished. Thus it may be confidently stated that the lower-floor type shown in fig. 5 is relatively ancient

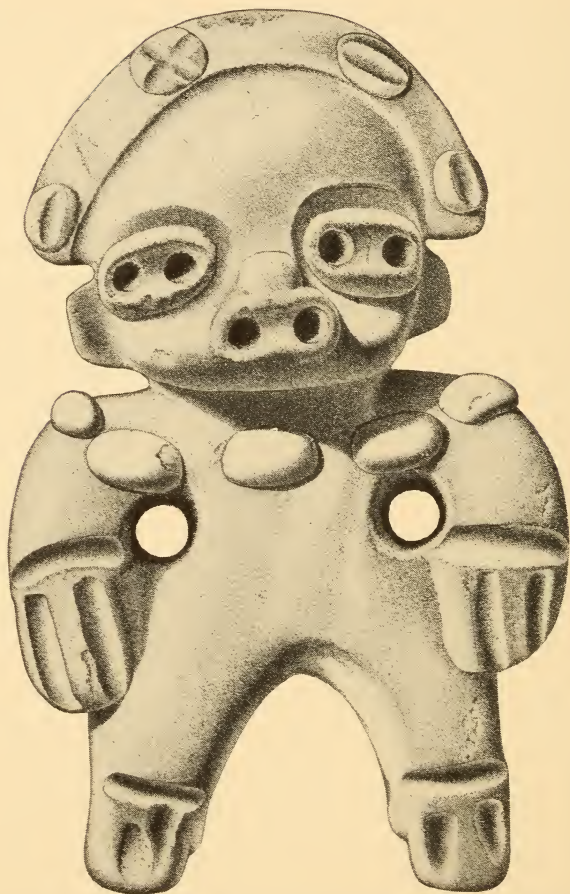


FIG. 17.—“Archaic” figurine of upper-level type, from Hacienda Tenango, Salvador. (Height, 7 inches)

and does not appear in the upper level. Conversely, such jars as fig. 18, *e-g*, identified as "Archaic" by various students, all come from the upper level both in Lenca and in Pipil territory, and never are found on the lower horizon. Therefore the archeological and stylistic evidence indicates that "Archaic" art appeared in Salvador long ago and persisted with variations down to the conquest. This exactly parallels what has been ascertained in Mexico, where this culture has been revealed far underground and where it continued to flourish with variations among such tribes as the Tarascans until the sixteenth century. In both Mexico and Central America it is the oldest culture now known; yet the technical diversity and excellence of the pottery in each case—old though it may be—show that it is far removed from the beginnings of pottery-making, and that we may confidently look forward to the discovery of still more ancient remains. The persistence of this culture—with great modifications, to be sure—for at least two thousand years renders the term "Archaic period" one to be used with extreme caution and careful definition.

The chronological relationship between the Maya and "Archaic" cultures has been an outstanding problem of Central American archeology, for no "Archaic" finds have been described from the great cities of the Maya Old Empire. However, students have failed to utilize an "Archaic" figurine head and fragments of two jars with "Archaic" faces on the necks, excavated at Copan in Mound 36. These pieces, now in the Peabody Museum, Harvard University, through the courtesy of



FIG. 18.—Approximately contemporaneous pottery types from Salvador.
a, d, Chorotega; *b*, Plumbate ware; *c*, Maya; *e-g*, late "Archaic"

Professor Tozzer are illustrated in fig. 19. Mound 36 contained a great many potsherds of Old Empire type, but the figurine in question looks very like the upper-level Salvadorean "Archaic" finds, for it is hollow and has apparently been made in a mold. The eyes are of the "coffee-bean" type, with a puncture in the middle of the slit. The mouth is two punctured dots connected by a slit.

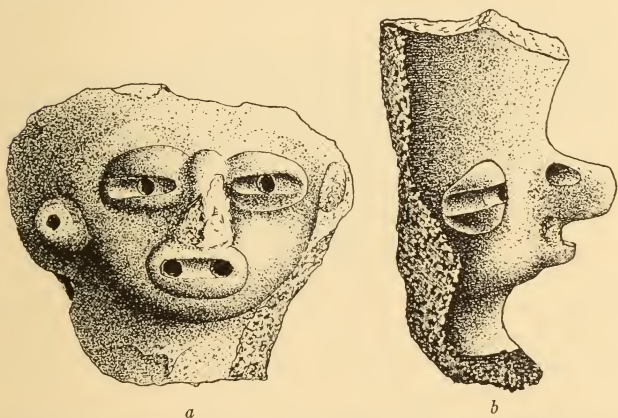


FIG. 19.—"Archaic" fragments from Mound 36, Copan. (Width of *a*, $2\frac{1}{2}$ inches.) Courtesy of Peabody Museum, Harvard University

The Copan jar fragments of "Archaic" type are much alike. They both are parts of slightly flaring necks from round-bellied vessels. Clearly they approximate the upper-level "Archaic" type seen in fig. 18, *e-g*, and have no affinity to ceramic forms known to be early in Mexico, Guatemala, and Salvador.

We may sum our knowledge of Old Empire Maya and

“Archaic” chronological relationship as follows: (1) In Salvador, at Copan, and in the Ulua valley in western Honduras, excavation has shown that the two are in part contemporaneous; (2) in central Salvador excavation has revealed evidence of the “Archaic” culture which is much more ancient and stylistically distinct from that associated with the Maya Old Empire. How far the earliest “Archaic” art antedates the Old Empire is a question for geologists to decide. We repeat here that the bulk of the volcanic ash separating the two in Salvador is vast and shows long periods of volcanic quiescence indicated by erosion. “Archaic” settlers must have occupied Salvador many centuries before the Christian era.

CHOROTEGAN CULTURE

Fonseca bay, on which the southeastern corner of Salvador fronts, was at first named Bahia de Chorotega by the Spaniards because its northern shore, now part of Honduras, was inhabited in the sixteenth century by Indians speaking the Chorotegan tongue. One would quite naturally expect to find the imprint of their virile culture in adjacent territory, and a good many examples of the Nicoya polychrome ware manufactured by the Chorotega have been found in various parts of Salvador. Nowhere, however, has Chorotegan workmanship been found to the exclusion of other arts, so, with a possible exception noted below, there is no reason to believe that actual Chorotegan settlements existed in Salvador. As for the pottery, in figs. 18, *a*, *d*, and

14, *a*, we illustrate three examples of Nicoya polychrome ware found in Salvador, each differing in shape, decorative pattern, and provenience. In fig. 20 there is a spiked bowl with a projecting reptilian head for a handle. This vessel clearly is related to the modeled alligator ware (Lothrop, 1926, *a*, pp. 249-253) found in western Nicaragua. Further evidence of Chorotegan influence is afforded by a small plumbate-ware vessel (fig. 22, *a*)

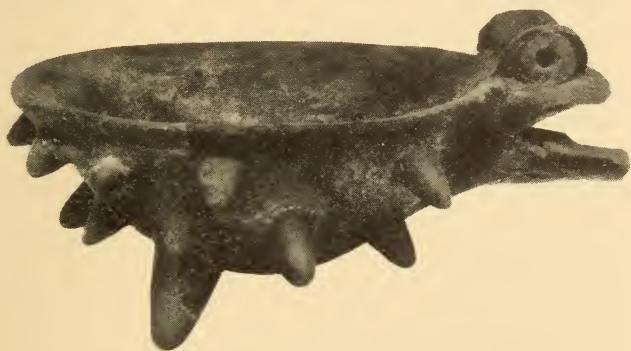


FIG. 20.—Modeled alligator ware bowl, Quelepa, Salvador

which reproduces in miniature a type of large stone-carving found in Chorotegan territory.

The writer has recently shown (1926, *a*, pp. 394-397) that many of the Nicoya polychrome-ware patterns were derived from Maya art of Old Empire times. Contact between the two cultures in Salvador, however, seems never to have taken place, and the borrowings must have occurred elsewhere. Historical evidence shows that the Maya and the Chorotega were separated by Lenca and Matagalpa populations living on the

northwestern side of Fonseca bay. The archeological evidence is that the Maya patterns borrowed by the Chorotega in many instances are of kinds unknown (at least at present) in the Maya art of Salvador. However, the presence of Chorotegan remains in western Honduras, especially those antedating the Maya period at Copan, indicate that the Maya and Chorotega were in contact there, probably at the beginning of the Christian era.

PLUMBATE WARE

The plumbate or glazed ware of Central America, distributed from northern Panama to Tepic in western Mexico, has proved a puzzling problem to the archeologist, for its distribution is greater than any other New World pottery type, its stylistic affinities are variable, and its manufacture covered more than a thousand years. Writing a decade ago, Saville (1916) stated that about a hundred of these vessels were above ground. This number has now very much increased, and nearly a hundred examples from El Salvador alone have been inspected by the writer. Most of these have come from the Pipil region in the center of the Republic. The place where plumbate ware was manufactured has never been determined, but the great number (comparatively speaking) of vessels found in central Salvador suggest that it was made there.

In the winter of 1926, being in Suchitoto, the writer made diligent inquiries among the local potters as to the existence of a "clay which assumed a natural glaze when fired." Several potters said that they had heard

rumors of such a clay having been used long ago. One old woman said that her grandmother had used such a clay and had obtained it from the locality known as the Valle Juancora. To this she added without prompting that this clay was most peculiar, for when fired at one temperature it turned a greenish-gray color, and when fired at another temperature it turned orange. This statement is, of course, a fairly accurate description of plumbate ware, and, coupled with the comparatively great number of specimens found nearby, strongly suggests that the center of manufacture was near Suchitoto.

The most ancient specimens of plumbate ware known to the writer probably are those discovered in tomb 10 at Copan and described by Saville (1916). In this tomb also there was discovered a piece of the Nicoyan polychrome ware, but unfortunately no pottery purely Mayan in type. However, the position of the tomb, near the main group at Copan, apparently indicates that we are dealing with material dating from the period of the Maya Old Empire. If we are right in believing that plumbate ware was manufactured near Suchitoto, the Copan find shows that the Suchitoto region was occupied in the early centuries of the Christian era and that the inhabitants traded with Copan. The presence of certain varieties of plumbate ware in the upper levels in Salvador, on the other hand, especially its discovery in contact with Toltec remains, indicates that it continued to be manufactured for many centuries.

The decoration on plumbate ware vessels—modeled and incised, because the vitrified surface did not lend

itself to painting—undoubtedly affords a basis for chronological classification. The earliest forms, to judge from the Copan finds, are jars with symmetrically rounded bodies and tall cylindrical necks. To these at times animal or bird heads, legs, or wings were attached, and by this additional modeled detail effigy vessels were created. Later, there developed an effigy



FIG. 21.—Plumbate ware. *a*, Hacienda Malilapa, Quezaltepeque; *b*, Suchitoto

type like the one described, except that many further details were brought out by incising, as in figs. 18, *b*, and 21, *a*. Jars like fig. 22, *b*, were probably manufactured at the same time. This group has no modeled decoration, but is adorned with incised patterns, often conventionalized derivatives of the widespread plumed serpent motive. Finally, plumbate ware lost its symmetry of outline in the endeavor to create more naturalistic effigy types. As a result we find bearded Tlaloc

faces like fig. 21, *b*, or lopsided vessels like the whistling jar published by Saville (1916). The material at present available to the writer does not justify a detailed chronological sequence, but further finds will probably make it possible. This should prove a boon to the student who wishes to extend Maya chronology, as plumbate ware passed so widely in trade.



FIG. 22.—Plumbate ware, Suchitoto, Salvador

A curious aspect of plumbate ware is the persistent influence of Chorotegan art. Thus we find the typical Chorotegan pear-shape vessel with a projecting animal head, as in fig. 21, *a*. Legs (fig. 22, *b*) are often hollow and pointed, as is the Chorotegan practice; but they are not hollow and cylindrical, or solid and oval, as in most of the Maya pottery from Salvador and Honduras. The animals portrayed in effigy—armadillo and jaguar

in the example illustrated—are frequently seen in Chorotegan art. Incised designs often parallel Chorotegan patterns. Finally, in fig. 22, *a*, we have the curious combination of alligator and man seen in Chorotegan stonework from western Honduras (Lothrop, 1921) to northern Costa Rica (Cabrera, 1924, p. 279).

Also plumbate ware shows Maya and, in later centuries, Pipil influence. Perhaps the earliest pieces were made by Chorotegan refugees from the Copan area who might have settled near Suchitoto. A small colony might soon have been absorbed ethnically and linguistically, but their pottery, highly prized—as shown by its wide distribution—might well have been manufactured with but little change by those who succeeded them. The successors of the original Chorotega may have been Maya, who, centuries later, gave way to the Pipil. This, of course, is no more than conjecture, based on the esthetic impulses reflected in plumbate ware and the assumption that it was all manufactured in one place.

LENCA AND MATAGALPAN CULTURES: EASTERN SALVADOR

We have already commented on the finding of an early “Archaic” type of pottery in eastern Salvador (fig. 5) and also a more elaborate form apparently derived therefrom (fig. 6). In addition, large numbers of “Archaic” figurines are found at such sites as Quelepa, (fig. 23, *a-d*), but these are often mold-made and resemble the upper-level “Archaic” finds in central Salvador. Hence we judge that for the greater part they are not of remote antiquity. In other words, the evidence



FIG. 23.—Figurine types of eastern Salvador. *a, b*, "Archaic"; *c, d*, Transitional; *e, f, h*, Lenca-Ulva; *g*, Chorotegan.



FIG. 24.—Eastern pottery types from Santa Elena, Estanzuelas, and Quelepa, Salvador. (Height of *e*, 8½ inches)

today available indicates that the "Archaic" culture made its appearance at an early date in eastern Salvador and persisted there until the coming of the Spaniards.

Chorotegan influence is easily detected in eastern Salvador in such vessels as fig. 18, *d*, from Santiago de Maria, and figurines like fig. 23, *g*. Blending of Chorotegan and "Archaic" motives results in fat-bellied Chorotegan figurine whistles topped with typical "Archaic" faces.

In the sixteenth century, Salvador east of the Lempa river was populated by Indians speaking the Lencan and Matagalpan tongues. With them, especially with the Lenca, most of the archeological remains seem to be associated. Figurine heads of a sub-Mayan style which we believe to be Lencan are shown in fig. 23, *e, f, h*. As for pottery vessels, there are several distinct unpainted wares, decorated with small relief figures or by incising. Effigy vessels such as fig. 24, *f*, exhibit a marked Antillean flavor in the treatment of the face. Incised designs at times resemble incised "Archaic" designs from central Mexico.

Typical shapes of several varieties of painted pottery are shown in figs. 18, *e-g*, and 24, *a-e*. The pieces in fig. 18 are of the neo-"Archaic" style (not found in the lower floor of stratified series), which we have shown to be contemporaneous with Pipil remains in central Salvador. Fig. 24, *d, e*, are vases of similar shape without modeled details, but decorated by simple designs in red paint. Fig. 24, *c*, is a widely distributed bowl type which reached its greatest popularity in northwestern South America. In Middle America

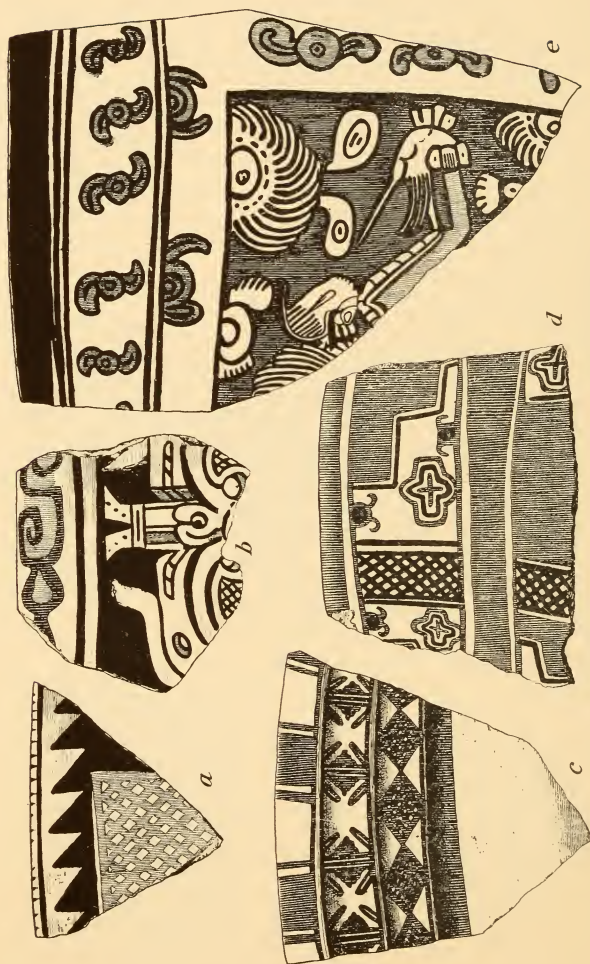


FIG. 25.—Polychrome sherds from Quelepa, Salvador

this shape occurs sporadically, but it was known at a fairly early period, as shown by its presence among pottery collections from Copan in the Peabody Museum of Harvard University.

Of the several painted designs seen in fig. 25, *b* and *e* are evidently inspired by Mayan motives, if they are not of actual Maya handiwork. They seem, however, to lack the quality of line found in the decoration accepted as unadulterated Maya (e.g., fig. 12, *c*, *d*), although both the major and minor patterns, as well as the use of black and red backgrounds, are common in southern Maya art. These sherds may be compared with the presumably Lencan pottery secured by Squier (1869) at Yarumela and Tenampua in central Honduras.

In fig. 25, *a*, *d*, we illustrate sherds with black and red geometric patterns. Unlike the common practice, the outline of these designs depends equally upon both colors, while usually New World pottery motives are outlined in black and filled with red. In the same illustration, *c* is a pattern executed entirely in red, a treatment frequently seen in eastern Salvador, both on vases like fig. 24, *d*, *e*, and on bowls. Likewise it is found (but more rarely) in the central part of the country. A common element in the decoration of the three vessels discussed in this paragraph is a cross-hatched panel. This feature may serve to link these eastern finds with the ware from central Salvador illustrated in fig. 14, *b*, which we believe to be Pipil handiwork.

In general the pottery of eastern Salvador falls below the artistic level maintained in the central section of the country. Definite individuality is lacking because

the ancient potters east of the Lempa were borrowers and blenders rather than creators of style. What little pottery from Lencan territory in Honduras is available for study shows a similar vagueness of type. However, a careful and thorough analysis of Lenca remains might yield interesting results, for cultural transfusion in Central America is an important problem.

HISTORICAL DATA

WE have so far considered the archeology of Salvador as a purely technical problem; it remains to treat it on an historical basis. The first inhabitants of Salvador now known, as we have explained, lived there a very long time ago when the surface of the land must have been quite different in detail from at present. As the refuse of these people is older than that of the Maya Old Empire, it is safe to say that they flourished more than two thousand years ago. The stylistic affinity of their handiwork to the "Archaic" art of the Valley of Mexico leads to the same conclusion. The technical excellence and artistic merit of the early pottery indicate that we may expect to find still older cultural phases.

Many centuries ago a series of cataclysmic volcanic eruptions rendered central Salvador uninhabitable. This plutonic activity may not have been merely a local occurrence, and may have caused ethnic disorders over a great area. To some such cause may be ascribed the splitting of linguistic groups which are found in Mexico and Nicaragua, such as the Chorotega and the Subtiaba-Tlapanec. Possibly thus also, before the

beginning of the Christian era, the Maya were induced to settle in the not over-attractive lowlands of the Peten and the Usumacinta valley. In all events, the abandonment of Salvador was probably complete, and lasted for a long time, as no remains are to be found for several feet above the lowest archeological floor.

Afterward Salvador was again settled by tribes, who, if they were not Maya, certainly were under Maya influence and maintained trade relations with Copan. Thus, objects of plumbate ware manufactured near Suchitoto in Salvador have been found in Copan tombs (Saville, 1916).

After the partial or complete abandonment of Copan—according to Morley (1920, p. 366) the latest date at that city is 9.18.10.0.0, 540 A.D.—its inhabitants scattered, some to the Ulua valley and some to Salvador. In the eighteenth century in the Department of Chalatenango there was a small Maya colony speaking the Chorti dialect (Documentos, p. 257), which may have been a remnant of Copan refugees. A few place-names in this tongue—Sumpul, Poy, Sacamil, etc.—are still in use.

Another Maya dialect, Pokoman, was spoken in the region of Chalchuapa at the time of the conquest (Documentos, p. 292). We judge that this colony was an offshoot of the larger Pokoman group in the highlands of Guatemala. The date of their arrival in Salvador is unknown. However, if certain large boulders sculptured as grotesque reptilian heads can be accepted as Pipil workmanship (as identified by Spinden, 1915, p. 472 and fig. 78), then the Pokoman probably came

after the Pipil, or just before the conquest. Our reason for stating this is that a few months ago there was found one of the reptilian heads which had been discarded and used as filling in the foundations of a mound at Chalchuapa. This, of course, might have been done by the Pipil themselves, but in view of the rarity of large stone-carvings in Salvador, it is more likely to have been done by somebody else, namely, the Pokoman. A point indicating further that the Pokoman had only just reached this region is the absence of place-names in their tongue.

The Pipil Indians, who speak a Nahuatl dialect recognized by students as more primitive than Aztec, occupied most of the western half of Salvador in the sixteenth century. Native tradition tells us they were Toltec who came to Salvador after the disruption of their empire in Mexico. If the reappearance in Salvador of such Mexican place-names as Tehuacan, Tepeaca, Toluca, Coxcatlan, etc., is significant, then it seems that the Pipil came from traditional Toltec territory to the southeast of the present Mexico City. In the *Historia de los Mexicanos por sus pinturas* it is stated that the ruler Ce Acatl in his journey to the mysterious Tlapalan left a colony in the province of Cuzcatlan in Salvador. The actuality of this "eastern land" is denied by some students, but Lardé (1926), quoting the statements of Cortés and Alvarado and other authorities, makes a strong case for its existence in central Honduras. In this he is supported by the Mexican type of temple grouping and a ball (*tlaxtli*) court at Tenampua in the Comayagua valley, described by Squier (1869). Additional weight to this argument

comes from the statement in the Alonso Ponce *Relación* (vol. I, p. 347) that some of the Indians near Comayagua spoke the Mexican or Pipil tongue.

It is unfortunate that we have not more exact information for dating the coming of the Pipil to Salvador. It is not likely that they arrived before the end of the eleventh century, as two great migrations from Mexico are known to have taken place at this time: one during the great drought which commenced in 1018 A.D. and lasted twenty-six years, the other after the destruction of Tula in 1064. However, the itinerant Toltec traveled slowly and did not necessarily settle again soon. Thus in Yucatan they did not become prominent until the capture of the city of Chichen Itza in 1196. Also the Nicarao, who left Anahuac at the time of the great drought, did not settle in Nicaragua until a century before the conquest, that is to say about 1400. We therefore seem safe in assuming that Pipil edifices, such as the ball courts of Cihuatlan and Tehuacan, and the accompanying minor antiquities, did not antedate the conquest by more than three centuries.

The last immigrants to reach Salvador from the north were Aztecs sent by the Emperor Ahuitzotl (1486-1502) in order to form a nucleus and espionage center that might be useful in case he decided to invade the country—an actuality which never came to pass.

Of the coming of the Lenca Indians to eastern Salvador and central Honduras, which they populated at the time of the conquest, native lore has preserved no tradition. For all we know they may have been the first settlers of the land. Indeed, one is tempted to believe that the "Archaic" culture may in part have

been their handiwork on the negative evidence that no other historic people in this region, Maya or Nahua, could have created it, as the stylistic and symbolic background of their productions is known to be different.

In eastern Salvador, two small villages, Lislique and Cacaopera, speak the Matagalpan tongue of Nicaragua. This fact has been determined by Sapper (1901) and confirmed by other students. The villagers themselves have no tradition of when or how they came to their present abodes. There is reason to believe that once they occupied a more extensive territory than at present.

As to the interplay of tribes in Salvador at the time of the conquest, it is clear that the Pipil were the most powerful group. They carried with them from their homeland their own esthetic traditions; from the neighboring Maya and Lenca, doubtless through the medium of intermarriage, they absorbed much. The discovery of trade pieces from Mexico shows that they continued to maintain relations with their former homes after their arrival in Salvador. To the southeast the Pipil made interchange with the Nicaraos and the Chorotegan tribes of Nicaragua, while even occasional jade pendants from Costa Rica and Chiriqui goldwork reached their hands.

Such then in brief is the history of Salvador in pre-Columbian days—as suggested by the archeological remains, linguistic data, and the meager morsels of native lore preserved by Spanish historians. However, with the establishment of archeological studies on the bed-rock of stratified remains, the road to a much fuller understanding of Central American cultural development is open.

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